# AMERICAN UNIVERSITY OF BEIRUT OBSERVATORY

## MONTHLY BULLETIN

## METEOROLOGICAL SECTION

FRANS BRUIN: DIRECTOR

HALIM HOURANI, OBSERVER

**BEIRUT, LEBANON**

Latitude: 33° 54' 22" N.

Longitude: $2^h\ 21^m\ 52^s.7$ E.

September 1959

LIBRARY
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WEATHER BUREAU

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# SEPTEMBER 1959

## METEOROLOGICAL REGISTER

| Date | Barometer reduced to O°C Sea level and 45° Latitude 700 mm. +... | | | | Thermometer Degrees Centigrade | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 8:30 | 14:30 | 20:30 | Mean | Max. | Min. | 8:30 | 14:30 | 20:30 | Mean |
| 1 | 54.8 | 54.5 | 54.9 | 54.7 | 32.0 | 22.9 | 27.2 | 30.6 | 25.4 | 27.7 |
| 2 | 55.8 | 55.2 | 54.9 | 55.3 | 31.5 | 24.0 | 26.7 | 30.4 | 25.5 | 27.5 |
| 3 | 56.0 | 55.6 | 56.0 | 55.9 | 30.5 | 23.5 | 26.7 | 28.4 | 25.7 | 26.9 |
| 4 | 55.9 | 55.1 | 55.3 | 55.4 | 32.3 | 24.1 | 27.0 | 31.5 | 26.2 | 28.2 |
| 5 | 54.7 | 55.2 | 56.0 | 55.3 | 32.0 | 23.2 | 27.2 | 31.6 | 25.7 | 28.2 |
| 6 | 56.4 | 56.3 | 56.6 | 56.4 | 31.1 | 23.6 | 26.4 | 29.2 | 26.0 | 27.2 |
| 7 | 57.5 | 57.3 | 57.9 | 57.6 | 30.1 | 23.7 | 26.4 | 29.4 | 25.8 | 27.2 |
| 8 | 57.9 | 57.4 | 57.5 | 57.6 | 32.2 | 23.8 | 27.0 | 31.6 | 26.4 | 28.3 |
| 9 | 57.3 | 56.4 | 56.1 | 56.6 | 31.7 | 24.3 | 27.0 | 31.5 | 26.1 | 28.2 |
| 10 | 55.6 | 55.3 | 55.2 | 55.4 | 30.0 | 23.6 | 25.3 | 29.0 | 24.5 | 26.3 |
| 11 | 54.2 | 53.8 | 55.4 | 54.5 | 30.5 | 21.6 | 26.0 | 29.0 | 24.2 | 26.4 |
| 12 | 55.5 | 55.0 | 56.4 | 55.6 | 29.1 | 21.2 | 25.8 | 25.0 | 22.8 | 24.5 |
| 13 | 56.5 | 55.5 | 57.3 | 56.4 | 29.4 | 19.7 | 25.2 | 28.0 | 23.5 | 25.6 |
| 14 | 58.3 | 58.2 | 59.3 | 58.6 | 29.0 | 21.5 | 24.3 | 27.5 | 23.9 | 25.2 |
| 15 | 60.6 | 60.4 | 60.8 | 60.6 | 29.3 | 21.4 | 24.9 | 27.8 | 24.0 | 25.6 |
| 16 | 61.0 | 59.8 | 59.6 | 60.1 | 27.0 | 21.5 | 24.2 | 25.2 | 23.5 | 24.3 |
| 17 | 60.1 | 59.4 | 59.7 | 59.7 | 28.3 | 21.2 | 23.8 | 26.6 | 24.3 | 24.9 |
| 18 | 60.3 | 60.0 | 60.1 | 60.1 | 29.6 | 21.4 | 24.4 | 27.8 | 23.5 | 25.2 |
| 19 | 59.6 | 58.6 | 58.8 | 59.0 | 29.8 | 22.0 | 24.5 | 27.8 | 23.5 | 25.2 |
| 20 | 58.1 | 57.2 | 57.1 | 57.5 | 30.0 | 20.6 | 25.7 | 29.5 | 24.5 | 26.6 |
| 21 | 56.6 | 56.5 | 57.5 | 56.9 | 28.1 | 18.5 | 20.6 | 20.8 | 22.0 | 21.1 |
| 22 | 59.1 | 59.8 | 61.2 | 60.0 | 28.7 | 20.7 | 24.0 | 25.8 | 23.0 | 24.3 |
| 23 | 61.8 | 61.0 | 60.9 | 61.2 | 26.9 | 21.5 | 23.5 | 25.4 | 24.3 | 24.4 |
| 24 | 59.4 | 57.5 | 56.8 | 57.9 | 27.9 | 23.4 | 24.6 | 26.8 | 26.0 | 25.8 |
| 25 | 58.6 | 58.6 | 60.0 | 59.1 | 29.4 | 21.9 | 25.2 | 26.5 | 23.5 | 25.1 |
| 26 | 61.3 | 60.9 | 61.6 | 61.3 | 28.4 | 22.0 | 24.2 | 27.0 | 23.7 | 25.0 |
| 27 | 62.6 | 61.2 | 61.2 | 61.6 | 26.6 | 21.2 | 24.0 | 25.0 | 23.0 | 24.0 |
| 28 | 59.6 | 57.2 | 56.6 | 57.8 | 26.9 | 21.2 | 23.1 | 25.0 | 23.5 | 23.9 |
| 29 | 55.6 | 54.9 | 55.5 | 55.3 | 29.5 | 22.3 | 23.8 | 29.2 | 24.0 | 25.7 |
| 30 | 56.1 | 56.6 | 58.3 | 57.0 | 29.5 | 22.7 | 25.0 | 28.8 | 24.0 | 25.9 |
| 31 | | | | | | | | | | |
| | 57.89 | 57.35 | 57.82 | 57.68 | 29.58 | 22.14 | 25.12 | 27.92 | 24.40 | 25.81 |

Barometer, range for month 762.6 mm. — 753.8 mm.
„ 71-yr. average for month 758.74mm.
Thermometer, range for month 32.3°C — 18.5°C
„ 82-yr. average for month 26.4°C
Rain total for month 22.89 mm.
„ 82-yr average for month 6.7 mm.
„ Total, Sept. 1st. to end of month 22.89 mm.
„ 82-yr average. Sept. 1st. to end of month 6.65 mm.

# SEPTEMBER 1959

## METEOROLOGICAL REGISTER

| Date | Pressure of Water Vapor Millibars | | | | Relative Humidity per cent. | | | | sun. | Wind per day | Rain |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8:30 | 14:30 | 20:30 | Mean | 8:30 | 14:30 | 20:30 | Mean | Hrs. | Kms. | m.m. |
| 1 | 24.7 | 26.1 | 25.6 | 25.5 | 68 | 60 | 79 | 69 | 10.1 | 85 | |
| 2 | 25.8 | 27.9 | 26.0 | 26.6 | 74 | 64 | 80 | 73 | 10.6 | 76 | |
| 3 | 25.9 | 27.2 | 28.1 | 27.1 | 74 | 70 | 85 | 76 | 11.1 | 58 | |
| 4 | 26.4 | 26.8 | 26.6 | 26.6 | 74 | 57 | 78 | 70 | 11.5 | 79 | |
| 5 | 24.7 | 23.6 | 23.2 | 23.8 | 67 | 55 | 71 | 64 | 10.7 | 174 | |
| 6 | 22.8 | 25.6 | 25.7 | 24.7 | 66 | 63 | 76 | 68 | 10.5 | 39 | |
| 7 | 20.5 | 25.0 | 25.4 | 23.6 | 59 | 61 | 76 | 65 | 10.0 | 39 | |
| 8 | 26.4 | 27.5 | 26.9 | 26.9 | 74 | 59 | 78 | 70 | 9.5 | 140 | |
| 9 | 25.3 | 25.2 | 24.4 | 25.0 | 71 | 54 | 72 | 66 | 9.5 | 132 | |
| 10 | 20.2 | 21.7 | 18.7 | 20.2 | 63 | 54 | 60 | 59 | 8.0 | 241 | 0.60 |
| 11 | 17.2 | 19.4 | 18.3 | 18.3 | 51 | 48 | 61 | 53 | 8.1 | 261 | |
| 12 | 19.6 | 21.4 | 19.0 | 20.0 | 59 | 68 | 72 | 66 | 4.0 | 129 | 1.00 |
| 13 | 17.0 | 18.0 | 17.3 | 17.4 | 53 | 48 | 60 | 54 | 5.3 | 164 | 0.40 |
| 14 | 18.8 | 18.8 | 18.1 | 18.6 | 62 | 50 | 61 | 58 | 8.8 | 180 | 1.72 |
| 15 | 19.3 | 19.4 | 17.4 | 18.7 | 62 | 52 | 56 | 57 | 9.6 | 119 | |
| 16 | 16.9 | 19.7 | 20.3 | 19.0 | 56 | 62 | 70 | 63 | 9.7 | 109 | |
| 17 | 21.7 | 20.8 | 21.0 | 21.2 | 74 | 60 | 70 | 68 | 8.9 | 63 | |
| 18 | 19.0 | 19.8 | 19.4 | 19.4 | 62 | 53 | 67 | 61 | 9.0 | 76 | |
| 19 | 20.0 | 22.9 | 20.3 | 21.1 | 65 | 62 | 70 | 66 | 9.1 | 100 | |
| 20 | 21.3 | 21.6 | 22.3 | 21.7 | 65 | 52 | 72 | 63 | 9.0 | 97 | |
| 21 | 21.5 | 22.6 | 21.9 | 22.0 | 89 | 93 | 82 | 88 | 3.3 | 85 | 18.97 |
| 22 | 19.3 | 19.6 | 18.7 | 19.2 | 65 | 59 | 67 | 64 | 8.9 | 129 | 0.20 |
| 23 | 17.7 | 16.0 | 17.7 | 17.1 | 61 | 49 | 58 | 56 | 9.3 | 114 | |
| 24 | 17.4 | 21.5 | 23.2 | 20.7 | 58 | 61 | 69 | 63 | 9.4 | 122 | |
| 25 | 22.9 | 26.1 | 20.5 | 23.2 | 72 | 75 | 71 | 73 | 8.1 | 82 | |
| 26 | 20.9 | 19.9 | 19.3 | 20.0 | 70 | 56 | 66 | 64 | 4.9 | 51 | |
| 27 | 21.0 | 21.2 | 21.1 | 21.1 | 71 | 67 | 75 | 71 | 8.5 | 51 | |
| 28 | 22.5 | 24.1 | 25.5 | 24.0 | 79 | 76 | 88 | 81 | 9.4 | 47 | |
| 29 | 23.1 | 24.7 | 23.0 | 23.6 | 79 | 61 | 78 | 73 | 9.2 | 89 | |
| 30 | 20.7 | 23.3 | 22.0 | 22.0 | 65 | 59 | 74 | 66 | 8.9 | 261 | |
| 31 | | | | | | | | | | | |
| | 21.35 | 22.58 | 21.90 | 21.94 | 66.9 | 60.3 | 71.4 | 66.3 | 8.46 | 113.07 | 0.76 |

Height of Barometer above sea level : 33.7 meters.
Height of Thermometers above ground :
Dry and wet 1.25 m. ; Max. 1.30 m. ; Min. 1.50 m.
Hygrometric data from readings of wet and dry bulb thermometers exposed in a Stevenson screen, reduced according to M.O. 265.
Rim of Rain Gauge : above ground 0.66 m. ; above sea level 30.31 m.
Rainfall is read at 20:30 for the preceding 24 hours.
71 year averages are for period, 1875-1945

# SEPTEMBER 1959
# METEOROLOGICAL REGISTER

| Date | Clouds clear—0 Overcast—10 | | | | beaufort, scale Direction and force of wind | | | Sea | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | 8:30 | 14:30 | 20:30 | Mean | 8:30 | 14:30 | 20:30 | | |
| 1 | 0 | 3st | 0 | 1.0 | 2sw | 2sw | 1sw | light | |
| 2 | 0 | 7cu-st | 1cu-st | 2.7 | 3sw | 3sw | 1nw | ,, | |
| 3 | 0 | 0 | 0 | 0.0 | 3w | 2n | 1nw | ,, | |
| 4 | 0 | 0 | 0 | 0.0 | 3w | 3sw | 1sw | ,, | |
| 5 | 0 | 0 | 0 | 0.0 | 3sw | 3w | 1sw | ,, | |
| 6 | 0 | 0 | 0 | 0.0 | 1ne | 2nw | 1nw | light | |
| 7 | 0 | 0 | 0 | 0.0 | 2ne | 3ne | 1ne | ,, | |
| 8 | 0 | 0 | 0 | 0.0 | 3sw | 3w | 2sw | ,, | |
| 9 | 0 | 3cu-st | 6cu-st | 3.0 | 3sw | 3sw | 1sw | ,, | |
| 10 | 8cu-st | 7cu-st | 8cu-st | 7.7 | 3sw | 4sw | 4sw | ,, | |
| 11 | 9cu-st | 7cu | 4cu-st | 6.7 | 4sw | 4sw | 2sw | light | Tr.a.m |
| 12 | 1cu-st | 9cu-st | 9cu-st | 6.3 | 3sw | 5sw | 3sw | ,, | |
| 13 | 9cu-st | 7cu-st | 6cu-st | 7.3 | 4sw | 4sw | 2sw | ,, | |
| 14 | 6cu | 5cu | 6cu-st | 5.7 | 3sw | 3w | 2sw | ,, | |
| 15 | 2cu | 6cu-st | 7cu | 5.0 | 3sw | 3w | 1w | ,, | |
| 16 | 0 | 0 | 0 | 0.0 | 3e | 3n | 2ne | light | |
| 17 | 6cu | 5cu-ci | 9cu-st | 6.7 | 2w | 2nw | 1w | ,, | |
| 18 | 0 | 9cu-st | 2cu | 3.7 | 3sw | 3sw | 1w | ,, | |
| 19 | 0 | 4cu-ci | 3cu | 2.3 | 2sw | 2sw | 1sw | ,, | |
| 20 | 3cu-st | 0 | 1cu | 1.3 | 2sw | 2sw | 1sw | ,, | |
| 21 | 10cu-st | 10cu-st | 0 | 6.7 | 3sw | 2s | 1sw | light | T.p.m |
| 22 | 0 | 6cu-ci | 0 | 2.0 | 3sw | 3w | 1sw | ,, | |
| 23 | 1ci | 1ci | 0 | 0.7 | 3ne | 3ne | 3ne | ,, | |
| 24 | 0 | 0 | 0 | 0.0 | 3ne | 3ne | 3ne | ,, | |
| 25 | 8cu-st | 0 | 1cu | 3.0 | 3sw | 3n | 1w | ,, | |
| 26 | 9cu-st | 4cu-st | 9cu-st | 7.3 | 1w | 1w | 1w | light | |
| 27 | 3cu-st | 0 | 0 | 1.0 | 1ne | 2ne | 1ne | ,, | |
| 28 | 5cu-st | 0 | 2cu | 2.3 | 2ne | 3ne | 1ne | ,, | |
| 29 | 0 | 5cu-st | 0 | 1.7 | 3sw | 3sw | 2sw | ,, | |
| 30 | 2cu-st | 3ci | 0 | 1.7 | 4sw | 3sw | 2sw | ,, | |
| 31 | | | | | | | | | |
| | mean | | | 2.86 | | | | | |

Abbreviations : G = gale; H = haze; M = mist ; T = thunderstorm ; D = dew
W = strong wind; Tr = trace of rain

## Number of Daily Wind Observations

| Time | N | NE | E | SE | S | SW | W | NW | Calm | Totals |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:30 | 0 | 6 | 1 | 0 | 0 | 19 | 4 | 0 | 0 | 30 |
| 14:30 | 3 | 5 | 0 | 0 | 1 | 13 | 6 | 2 | 0 | 30 |
| 20:30 | 0 | 6 | 0 | 0 | 0 | 16 | 5 | 3 | 0 | 30 |
| Total | 3 | 17 | 1 | 0 | 1 | 48 | 15 | 5 | 0 | 90 |

Number of days with rain 6, fog 0, thunderstorms 1, gale. 0
71 yr. av. number of days with rain during month 1.13
Time of reading minus 2 hours equals G.C.T